NORTHWOODS JOURNAL – MAY 2021

A Free Publication about Enjoying and Protecting Marinette County's Outdoor Life

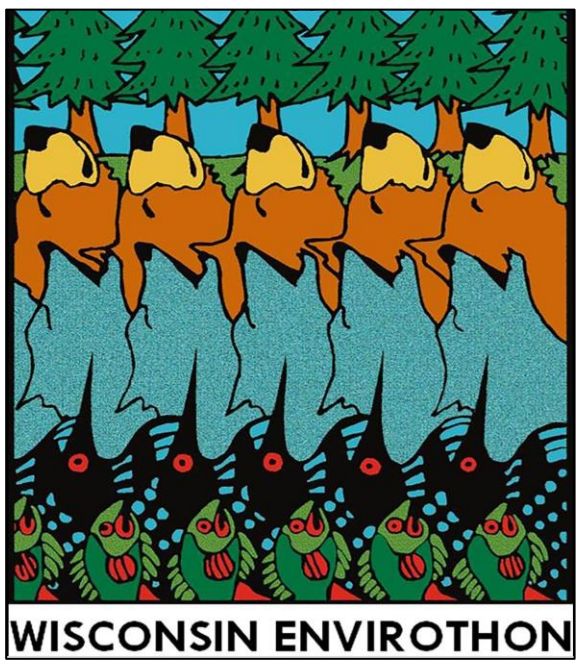
In This Issue:

New Parking Area at Dave's Falls County Park

See page 9 for more about it!

2021 Wisconsin Envirothon Competition Held Virtually April 16

https://wisconsinlandwater.org/events/envirothon



Wisconsin Envirothon is the state's ultimate middle and high school environmental science challenge, where teams of five high school or middle school students participate in the hands-on, outdoor field challenges designed by natural resources professionals and educators. This day-long event is an excellent opportunity for students to develop leadership and communication skills that champion a more sustainable and environmentally-aware community.

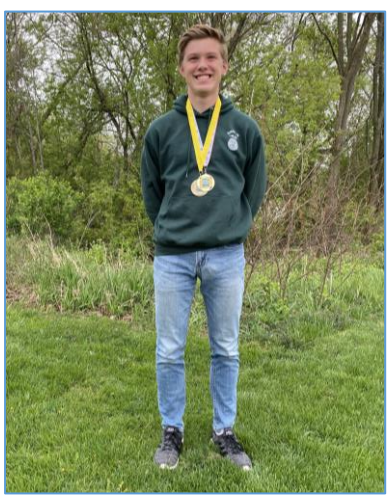
Teams take exams based on four categories: Forestry, Soils & Land Use, Aquatic Ecology, and Wildlife. In addition, teams create group presentations based on a pre-selected, topical conservation issue that local conservation professionals are dealing with across the state. The 2021 issue is 'Water Resources Management: Local Control and Local Solutions'. The team presentations help students articulate today's critical environmental concerns and develop the skills to communicate the conservation ethic in whatever scholastic, career, or civic choices lie ahead.

Since 2016, Anne Bartels of the Marinette County Land Information Department-Land & Water Conservation Division has written and supervised the Wildlife Exam as the Station Captain. The event was cancelled in 2020 due to COVID, and in 2021, Envirothon went virtual due to ongoing COVID concerns.

Above: Students use an identification key to differentiate rodent skulls during the Wildlife Exam

Above: teams at the Soils Exam station; below, activities during the Forestry Exam

Winners advance to the North American Envirothon/Regional Envirothon to compete for scholarships and prizes, which will also be held virtually this year. This year, Wisconsin's winners are the Slinger High School Future Farmers of America Chapter, below. Visit https://wisconsinlandwater.org/files/events/WI_Envirothon_2021_Winners_Final.pdf for a full press release including all first-place winners.



For more information about this event and more about how to participate in 2022, visit wisconsinlandwater.org/events/envirothon, or the national website at https://envirothon.org/.

Harmony Arboretum & Demonstration Gardens Again Open to the Public in 2021

https://www.marinettecounty.com/departments/land-information/environmental-education/harmony-arboretum/

Located at N3890 County Road E in Peshtigo, Harmony Arboretum is located 7 miles west of Marinette on Highway 64 and 1/2 mile south on County E. It's free and a good way to spend some outdoor time surrounded by nature.

Due to COVID last year and statewide quarantines and shutdowns, the fenced-in portion of the Harmony Arboretum was closed to the public. Now people can again visit the fenced-in area at Harmony, which contains an orchard, a children's garden, herb and vegetable garden demonstration areas, a shade house and water feature, shortgrass prairie, bird habitat, and more. The prairie and woods trails continue to also be available to the public for enjoying nature.

A view of the pavilion from the wetland display area

This 460-acre county farm, formerly known as Harmony Farms, has been developed into a conservation and horticulture education area. It holds a majestic hardwood forest, demonstration prairie, a pine plantation, winding walking trails, agricultural fields, and a variety of vegetable and flower demonstration gardens. Although the Land & Water Conservation Division manages this area to provide wildlife habitat, recreation, and environmental education opportunities, management decisions are made with the help of the Northern Lights Master Gardeners Association and Extension-Marinette County.

The Northern Lights Master Gardeners plant and care for the demonstration gardens. There is a wide range of perennials and annuals, vegetables, and fruit to look at and perhaps photograph. The Master Gardeners are out at the arboretum on a regular basis and always welcome questions. Usually throughout the growing season, the Master Gardeners sponsor workshops on different subjects all relating to gardening and horticulture. The Land & Water Conservation offers nature programs in addition to the Master Gardeners events *(note – nothing is planned in 2021 currently due to COVID concerns).*

The shade house was rebuilt in 2019 and features a variety of shade-loving plants.

In the Harmony Hardwoods Memorial Forest, there are great birding opportunities and a visit is like walking back into time. There are trees here that managed to escape the Great Peshtigo Fire in 1871 that burned 1.2 million acres in Northeastern Wisconsin. There are trail markers and a corresponding brochure to guide visitors around the nature trail.

The 17-acre demonstration prairie is managed by the Land & Water Conservation. Prescribed burning is used to manage the area - fire kills invasive plants and young trees that could take over the area and leaves the prairie species whose deep roots allow them to survive and grow back quickly. Bring a prairie flower guide and take a walk on trails that meander throughout the prairie showcasing the flowers and grasses.

Above – the entrance to the prairie trail; below – yellow coneflower (*Ratibida pinnata)* in bloom

For more information about Harmony Arboretum, visit:

- https://www.facebook.com/Northern-Lights-Master-Gardeners-Association-Volunteers-NLMGA-128084290595975/
- https://marinette.extension.wisc.edu/horticulture/harmony-arboretum/
- https://www.therealnorth.com/where-to-play/activities/
- https://www.tripadvisor.com

Spring Wildflowers at the Harmony Hardwoods!

Going for a spring hike? This is the perfect time to take a hike at the Harmony Arboretum Hardwoods! Harmony Arboretum is located west of Marinette on State Highway 64, then south on County Road E for a 1/2 mile. Watch for the sign. The Arboretum is open again, and the visit is free. Follow the gravel road to the pull-around parking area and take the trail into the woods.

Common Blue Violet, *Viola sororia*, is an important host plant for a group of butterflies called frittilaries.

Here is a guide to the flowers and plants you may see in spring at the Harmony Hardwoods.

Above – Bloodroot; Below – Wild Strawberry

National Wildlife Federation's *Great Northwoods Initiative*

Excerpts from https://blog.nwf.org/2020/12/protecting-our-great-northwoods/ and https://dnr.wisconsin.gov/topic/forestplanning/actionplan2020

Stretching across millions of acres north of the 45th parallel in Michigan, Minnesota, and Wisconsin, our Great Northwoods is one of the most revered places on the continent. These ecologically-rich hardwood forests include thousands of sparkling freshwater lakes and miles of free-flowing streams, providing vital habitat for a variety of wildlife. Close to major population centers, the Northwoods also bring unparalleled opportunities for people to relax, recreate, and reconnect with nature.

The Great Northwoods is facing many challenges that threaten its preservation

Pressures in the Great Northwoods are ever-increasing, while funding for science-based management is dwindling. Ongoing pressure to extract resources, a rapidly-changing climate, growing outbreaks of deadly wildlife diseases, all threaten the Northwoods' existence as a special place for people and wildlife.

To protect these vital public lands for future generations, the National Wildlife Federation (NWF) is launching a new *Great Northwoods Initiative*. The scope of the project will include northern hardwood forests above the 45th parallel in Michigan, Minnesota and Wisconsin, stretching from Lake Superior to Lake Huron.

Working with local partners including Michigan United Conservation Clubs (MUCC), Wisconsin Wildlife Federation (WWF) and Minnesota Conservation Federation (MCF), we will focus on:

- The need to maintain biodiversity and health in native species
- Sustainable management of northern hardwood forests as an economic driver for the region
- Recognizing and actively managing forests for the impacts of climate change
- Expanding multi-use outdoor recreation opportunities to marginalized communities that have historically been excluded due to socioeconomic and racial barriers

Northwoods Journal Online

Want to read issues of the *Northwoods Journal* online? Go to www.marinettecounty.com and search for 'Northwoods Journal". We can also send you an e-mail reminder when each new issue is posted online, or you can get a copy mailed to you. Contact Anne Bartels, Information & Education Specialist at 715-732-7784 or email abartels@marinettecounty.com.

In Wisconsin, the Statewide Forestry Action Plan is a 10-year strategic plan for the forestry community that spans 2020-2030. The document shares long-term comprehensive goals and strategies to help the forestry community refine how it will collectively invest state, federal and partner resources to address major management and landscape priorities.

This plan fulfills a requirement of the Cooperative Forestry Assistance Act as amended by the 2008 and 2014 Farm Bills. While the plan does not prescribe the work of any member within the forestry community, it is a tool that can be used to:

- Share forest-relevant data, information and trends,
- Define and explore emerging threats to Wisconsin forests,
- Identify specific regions or issues that would benefit most from increased attention,
- Focus the state towards the work that is most important during the plan's timeframe, and
- Assist partners within the forestry community to determine their niche in addressing the plan's goals and strategies.

The Michigan Department of Natural Resources (DNR) is updating its 10-year management plan for some 19.3 million acres of forest land in both the upper and lower peninsulas (2020 Michigan Forest Action Plan). The National Wildlife Federation has identified a number of issues that deserve greater attention. In October 2020, we submitted comments to the DNR that highlight several key issues, including:

- The need to include tribal representatives in decision-making
- Addressing deferred maintenance of recreational facilities
- Increasing access to recreation for historically disadvantaged and underserved communities
- Balancing the interests of those seeking roadless or wilderness characteristics in the state forests with those seeking off-highway or other motorized trail access

The draft plan provides some wonderful background and data about our changing climate, but does little to demonstrate how the state will prepare for and combat major shifts in Michigan's climate that will impact forest lands and the wildlife that currently thrive there. It also fails to recognize the changing demographics of outdoor enthusiasts.

National Wildlife Federation's long-standing focus on sustainable and active forest management uniquely positions us and our partner organizations to tackle the issues most important to the health of wildlife and the people who coexist with the Great Northwoods.

Share the Trail: Etiquette Tips for a Better Outdoor Experience

https://dnr.wisconsin.gov/topic/Parks

Spring means new trails and new opportunities for adventure in Wisconsin's outdoors. It's also a good time to remember to share the trail and practice caution on muddy or rutted trails.

Here are a handful of good practices to help make everyone's outdoor experience (including your own) more enjoyable.

Muddy and Rutted Trails:

- Try to use hard surface trails like asphalt or stone this time of year rather than native surface or dirt/grass trails.
- Think before you sink; if you leave tracks, turn back and try another trail.
- Seek out upland trails or trails in sandy areas that drain well.
- If you come across a muddy, wet or icy section of trail and cannot turn back, go right down the middle and embrace the mud - do not go around it and widen the trail tread which can damage habitat.
- Avoiding muddy trails now helps to limit closures and repairs later.
- Be mindful of safety issues like slippery areas or areas covered in water - walk your bike and go slowly.

Etiquette Tips for Every Season:

- Know before you go. Learn what types of trail use are permitted at your destination and obey traffic (and other) laws and signs.
- Ride single file. You can ride two or more abreast if you will not block other traffic.
- Walk with no more than two people across to allow others to pass.
- All users should stay right except to pass. Pass on the left of those you're passing.
- When passing, move to single file and announce yourself (verbally or with a bell) before passing. Slow down when maneuvering around other trail users.
- Pets must be on a leash 8 feet or shorter and kept under control. Keep your pet out of the path of oncoming or passing traffic. When possible, walk with your pet on the outer edge of the trail.
- Pack it in, pack it out. Pick up your litter.

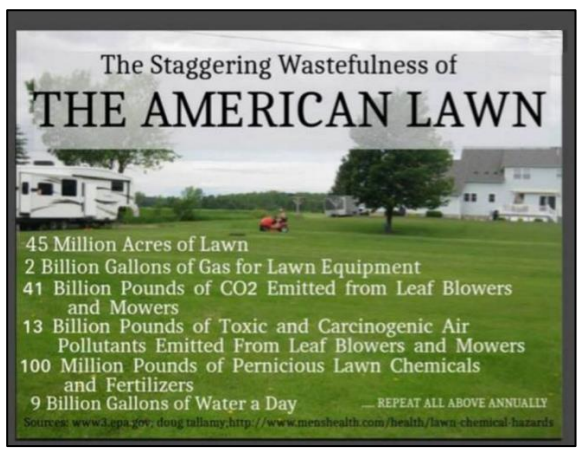
Thank you for helping keep our trails safe for all users. Please be considerate of all trail users and keep a physical distance of 6 feet between yourself and those outside your group. Learn more about safety guidelines and trail etiquette: https://dnr.wi.gov/files/PDF/pubs/pr/PR0472.pdf.

Welcome Pollinators to your Lawn with 'No Mow May'

https://beecityusa.org/welcome-pollinators-to-your-lawn-with-no-mow-may/

A lush, green, weed-free lawn has historically been center stage in American landscaping. It tells the whole neighborhood that you are a competent, hard-working, contributing member of society. Dandelions and an overgrown lawn are a sign of neglect, incompetence, and laziness - or so our culture would have you believe.

Americans have a love affair with lawns - maintaining roughly 40 million acres, or 2% of land in the US, making them the single largest irrigated crop we grow. Lawns require frequent mowing, raking, fertilizing, weeding, chemical treatment, and watering - sucking up time, money, and other resources. Not only are lawns burdensome for the people maintaining them, but they also provide little positive benefit to wildlife, and in fact are often harmful.



The traditional monoculture lawn lacks floral resources or nesting sites for bees and is often treated with large amounts of pesticides that harm bees and other invertebrates. When we think of habitat loss, we tend to imagine bulldozers and rutted dirt, but acres of manicured lawn are as much a loss of habitat as any development site. Re-thinking the American lawn can take a variety of forms from reducing mowing frequency or area mown to permanently converting lawn to a more diverse and natural landscape.

Do More By Doing Less

Mowing your lawn less creates habitat and can increase the abundance and diversity of wildlife including bees and other pollinators. One way to reduce mowing is by participating in **No Mow May**. No Mow May is a conservation initiative first popularized by Plantlife, an organization based in the United Kingdom, but which is gaining traction across North America. The goal of No Mow May is to allow grass to grow unmown for the month of May, creating habitat and forage for early season pollinators. This is particularly important in urban areas where floral resources are often limited.

In 2020, residents of Appleton, Wisconsin, an affiliate of Bee City USA, became energized about No Mow May and the City Council agreed to suspend their weed ordinance for the month of May. Over 435 registered property owners participated in the campaign, and Lawrence University, an affiliate of Bee Campus USA, partnered with Appleton to conduct research on the impact of No Mow May on pollinators.

Researchers Israel Del Toro and Relena Ribbons collected data on the abundance (the number of individuals) and species richness (the number of species) of flowers and bees found in unmown yards of a subset of the properties participating in No Mow May. They then compared those numbers to the abundance and richness of flowers and bees found in nearby urban parks that are regularly mowed. The findings were impressive!

Not only were the abundance and richness of bees higher in the yards of properties participating in No Mow May, but they were way higher. Participating yards had three-times higher bee species richness and five-times higher bee abundance than nearby parks that had been mowed. This study was published in 2020 and is available for free download online. Empowered by their success in 2020, Appleton has spread the word and attracted even more participants in 2021.

Other studies have looked into how reducing the frequency of mowing throughout the growing seasons impacts bees. In a recent experiment conducted by Susannah Lerman, a research ecologist with the USDA Forest Service's Northern Research Station, Lerman and her collaborators explored whether different lawn mowing frequencies influenced bee abundance and diversity. The team mowed herbicide-free suburban lawns at different frequencies (every week, every other week, and once every three weeks) in Springfield, Massachusetts. The results of their study found bee abundance increased when lawns were mown every other week. Mowing every three weeks resulted in more than double the number of flowers available in lawns (mainly dandelions and clover), and increased bee diversity - yet lowered overall bee abundance versus the every-other-week strategy. The researchers hypothesize that, while the three-week mowing cycle left more flowers in the lawn,

the length of the competing turfgrasses made the flowers harder to find. Lerman and her colleagues documented a staggering 93 species of bees, with supplemental observations bringing the total number to 111 bee species—nearly a quarter of all bee species native to the area!

The efficacy of reducing mowing may be expanded upon by altering the composition of your lawn to include more flowering species. A "bee lawn" may include Dutch clover (which captures nitrogen and helps feed the lawn) as well as other low-growing flowering plants such as creeping thyme (*Thymus* spp.), self-heal (*Prunella vulgaris*), and others. Some plants, such as native violets (*Viola* spp.) may already be present and should be encouraged as they are valuable host plants for fritillary butterflies. *For more information about creating a flowering lawn please see the resources at the end of this article.*

In addition to benefiting pollinators, reducing mowing frequency will save water, help your lawn become more resilient to drought, and reduce emissions from gas-powered lawn equipment that often lacks the emission reduction equipment found on larger engines.

Go Lawnless! Lawn certainly has its place. It provides a perfect platform for kicking a ball around, provides "accommodation" for the needs of pets, and can be used to define space in landscape design. But how much lawn do you really need, and to what standard must it be maintained? Do your kids need a perfect, weed-free lawn to play on? Do you really need to measure your lawn in acres rather than feet? In addition to reducing the amount you mow, think about reducing the amount of lawn that needs mowing. In place of that lawn, consider planting a rain garden, pollinator garden, or wildflower meadow - or replacing your turf grass lawn with native lawn alternatives.

What About Weed Regulations? Most cities and municipalities have some form of weed ordinance that dictates the height and sometimes even the types of plants a homeowner is allowed to grow. Unfortunately, many of these ordinances are woefully out of date and out of touch with the modern movement towards creating yards that support wildlife in urban settings. While local ordinances will vary greatly from place-to-place, here are a few tips for keeping local officials, and your neighbors happy:

- **Maintain a mowed buffer**. Yes, after spending a considerable amount of time discussing the problems with lawn, we are suggesting you keep some - strategically. Keeping a mowed edge in front of or around a natural planting of a foot or two may be all that's needed to define "lawn"

Continued next page

Thursday, May 20, 2021 is Wisconsin School Garden Day!

https://wischoolgardens.org/wisconsin-school-garden-day-2021/

The third annual Wisconsin School Garden Day is May 20, 2021! Wisconsin is a leader in the garden-based education movement. Wisconsin School Garden Day brings recognition to the people and programs giving Wisconsin's youth access to innovative, hands-on educational opportunities. The day has been recognized annually by a Governor's Proclamation signed by Governor Tony Evers.

This year, you may be celebrating virtually or in person. We encourage everyone to celebrate Wisconsin School Garden Day in a way that is safe and best fits them and/or their programs. Any activity that involves kids engaging with a garden or gardening - including, but not limited to, activities around planting, observing, art, literature, STEM, weeding, and planning - can be a way to celebrate Wisconsin School Garden Day.

A pollinator garden was installed in July 2019 at Crivitz Elementary (above) for educational use. Below is the garden in May and August 2020, respectively.

You can participate in Wisconsin School Garden Day by engaging in some type of garden-based education activity or celebration on May 20, 2021 (or another day that week).

As always, there is no right way to celebrate. Everyone is encouraged to celebrate Wisconsin School Garden Day in a way that is safe and best fits them and/or their programs. To learn more about Wisconsin School Garden Day, including resources and activity guides, visit www.wischoolgardens.org/wisconsin-school-garden-day-2021.

This pollinator garden at Wausaukee School was installed in early June 2019. The picture above is from July 2020; below, 4th graders explore the insect life in the garden in September 2020.

This year, Peshtigo Middle School 7th graders in the STEM class will help plan and install a pollinator garden for a project that will benefit both the school and the city of Peshtigo.

If you're looking for inspiration:

- Check out participants from 2020 and 2019 to see what schools have done to celebrate.
- Read through the 2021 Wisconsin School Garden Day Activity Guide for suggestions that are engaging and easy to implement at your school or program.
- Organizations from across the country have been developing activities and curricular materials to help families and educators incorporate garden-based learning - both in the garden and in the virtual classroom - in ways that are accessible to all children. You can find these high quality, free resources here.

Above - a pollinator garden was installed in early September 2020 at the Victory Boys' School in Amberg.

We want to know what you have planned! If you celebrate Wisconsin School Garden Day, tell us about it! You can email Communications Director Renata Solan or share on Twitter or Facebook with the hashtag *#WISchoolGardenDay.*

Continued from page 4 – *No Mow May*

from "garden" and keep you in step with local ordinances or Homeowner Association guidelines. Maintaining a tidy mowed edge also makes a busy natural planting look less overwhelming, and makes these spaces look intentional rather than neglectful.

- **Engage with your city council, health department, or other local officials**. Tell them what you are doing, why, and begin a conversation about how they can support natural landscapes in their community. This fact sheet from Penn State can help arm you with facts to overcome the common myths that have led to overly restrictive weed ordinances.

- **Suggest an "opt-in" program, such as a Natural Lawn Registration program** to sidestep the need to re-write a health code ordinance. Under such a model, a homeowner may register their natural landscape with their local health department. The health department can then decline to fine registered properties as long as they are maintaining the natural landscape properly and not encouraging the spread of noxious weeds.

- **Educate your neighbors and passersby about your landscaping choices.** Displaying a simple sign (examples below) designating your yard as pollinator habitat can be the difference between it being seen as a neglected area to people viewing it as an important part of a thriving landscape.

Resources for lawn alternative ideas, information, etc.:

- ✓ https://bluethumb.org/turf-alternatives/pollinator-lawn/
- ✓ www.beelab.umn.edu/learn-more/beelawn
- ✓ https://www.nrdc.org/stories/more-sustainable-and-beautiful-alternatives-grass-lawn
- ✓ https://www.nrdc.org/resources/toward-sustainable-landscapes-restoring-right-not-mow
- ✓ https://learn.eartheasy.com/guides/lawn-alternatives/
- ✓ https://www.nrs.fs.fed.us/pubs/55816 - lawn mowing frequency & bees study

Poison Ivy – How to Identify It, Avoid It, and Control It

https://hort.extension.wisc.edu/articles/poison-ivy/

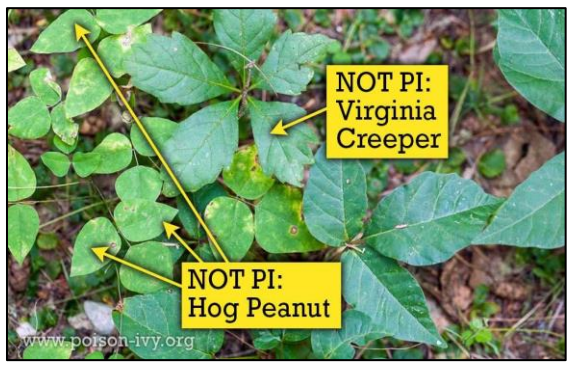
Young poison ivy leaves (left) can have smooth margins, while mature poison ivy leaves (right) often have serrated or lobed leaf margins.

What is poison ivy? Poison Ivy (*Toxicodendron radicans)*, is a perennial woody plant that grows as either a low shrub or a climbing vine. Poison ivy is native to North America and is common in Wisconsin, growing in pastures, roadside ditches, fence rows, wooded forests, beaches and parks. *Contact with poison ivy can lead to skin rashes, skin blisters, or other allergic reactions.*

What does poison ivy look like? Poison ivy has alternate leaves, and each leaf has three leaflets. The middle leaflet has a short stalk and is larger than the two other leaflets. Leaflets are variable in shape but are typically oval with pointed tips. The margins (edges) of leaflets can be smooth, serrated (i.e., resemble a saw blade) or lobed. In late summer, poison ivy produces clusters of whitish berries (below). These berries are eaten by birds, and the seeds inside are spread through bird droppings.

Other common plants can be confused with poison ivy. These plants and the characteristics that distinguish them from poison ivy are outlined in the table below:

Look Alike Species	How to Distinguish from Poison Ivy
Boxelder (seedlings)	**Opposite branching**; 3+ leaflets per leaf
Ash (seedlings)	**Opposite branching**; 3+ leaflets per leaf
Virginia creeper	**5 leaflets per leaf** (newly emerged leaves may have fewer)
Wild sarsaparilla	**3 leaves at the top of stem**; each leaf with 3-7 leaflets
Raspberry/blackberry	3+ leaflets per leaf; **spiny stems**
Clematis/virgin's bower	**Opposite branching**; side leaflets with obvious stalks
Hog peanut	**Leaves without teeth or lobes**; weak stemmed
Jack-in-the-pulpit	Leaves with 3 leaflets; leaflets all stalkless
Wild Strawberry	Leaves with 3 leaflets; leaflets all stalkless



Why is poison ivy a problem? All parts of poison ivy plants (including leaves, stems and roots) produce a resinous oil called urushiol that can cause severe itching, inflammation and blistering. The oil can be spread by anything that comes in contact with poison ivy including garden tools, clothing, boots or pets. Urushiol is present not only in living poison ivy plants but can remain active in dead plants for up to two years. Skin sensitivity to poison ivy can vary from person to person. If you burn poison ivy, the vaporized oil that is released can cause severe systemic allergic reactions if inhaled.

How do I avoid or reduce problems associated with poison ivy? *Learn how to identify poison ivy and avoid contact with the plant whenever possible.* If you will be working in an area where poison ivy is likely to grow, wear long pants with boots, a long-sleeved shirt and gloves to help reduce exposure. In addition, you may want to use a poison ivy preventative lotion that can provide additional protection. After working in a poison ivy-infested area, carefully remove and wash your clothing with hot, soapy water. Use sanitary wipes to clean gardening tools or other items that may have come in contact with poison ivy plants.

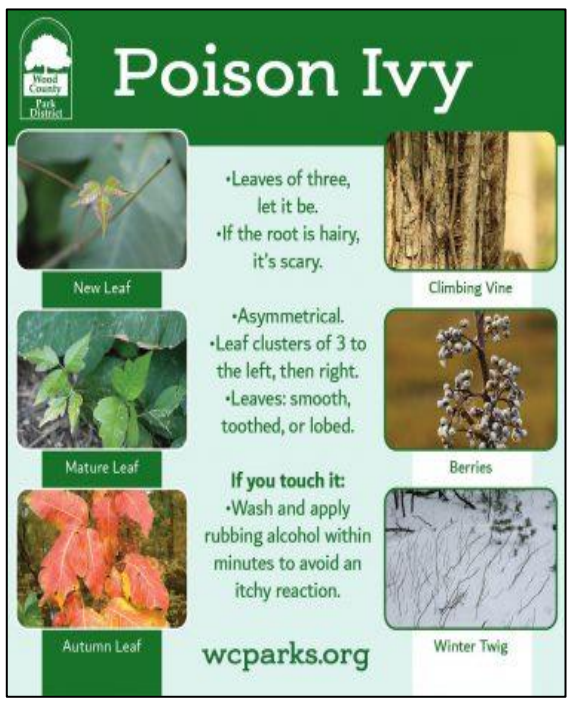
If you believe you have come in contact with poison ivy, immediately wash any potentially exposed skin with regular soap under cold, running water. Avoid using complexion soaps as these types of soaps tend to spread urushiol on the skin and can make the problem worse. Poison ivy cleansing products (e.g., Tecnu skin cleanser) can help remove urushiol from skin if used within four to eight hours of exposure. Magnesium sulfate containing skin products (e.g., Dr. West's Poison Ivy Wash) can also help to detoxify urushiol and ease itching. If you believe you have inhaled urushiol vapor, IMMEDIATELY contact a physician for advice. If you believe your pet has been exposed to poison ivy, immediately bathe them using a pet-safe shampoo to remove urushiol residues.

How can I control poison ivy? Herbicides containing the active ingredients glyphosate and triclopyr are effective in controlling poison ivy if used according to the label directions. Use foliar sprays to spot treat shrub-form poison ivy plants or vining poison ivy growing on inert objects (e.g., fences), but only apply treatments after leaves are fully expanded and plants are actively growing (i.e., summer and early fall).

DO NOT apply foliar sprays to poison ivy growing on trees and shrubs (below), as the herbicide may damage these supporting plants.

Alternatively, at any time of the year, cut poison ivy stems near the soil surface and paint the stumps with a more concentrated herbicide formulation. Be sure to read the instructions on the label of whichever herbicide you select for details on how to use the product in the safest and most effective manner possible.

When removing poison ivy plants, collect all of the above ground plant parts. Also, be sure to rake the ground to collect any leftover poison ivy berries, leaves, stems and roots. DO NOT burn or compost any of these materials. Instead, bag and dispose of them in your municipal garbage. After you remove plants and debris, spread four to six inches of clean wood chip mulch over the site to prevent possible exposures to urushiol that may remain on or in the soil.



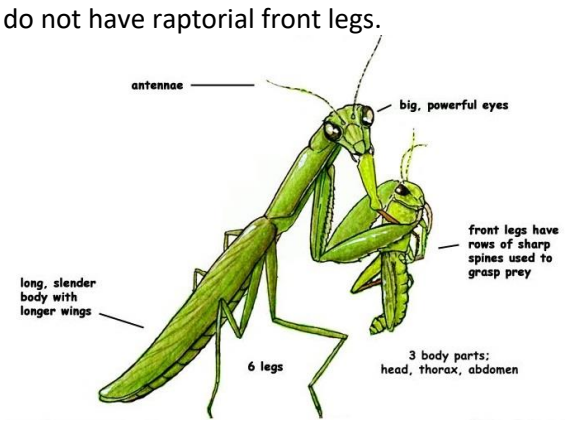
For more information about poison ivy, visit:

- https://blog.nature.org/science/2018/07/10/poison-ivy-busting-myth-itch/
- https://www.mayoclinic.org/diseases-conditions/poison-ivy/symptoms-causes/syc-20376485
- https://www.webmd.com/skin-problems-and-treatments/guide/understanding-poison-ivy-oak-sumac-basics
- https://www.fda.gov/consumers/consumer-updates/outsmarting-poison-ivy-and-other-poisonous-plants

Praying Mantids – Interesting Insects in your Garden

https://hort.extension.wisc.edu/articles/praying-mantids/

The praying mantids – mantis really refers only to the genus *Mantis*, while mantid refers to the entire group – are an order of insects (Mantodea) that appear to be "praying" when their front legs are held at rest. These long, narrow insects have a distinctive appearance with the large, characteristic raptorial (folded back like a pocket knife) front legs modified for grasping prey, with long, sharp spines (that fit into grooves on the opposing parts when not in use) for holding what they catch. They also have an elongated thorax that functions like a neck, enabling the triangular head with its large, compound eyes to swivel almost all the way around. Walking sticks might be confused with mantids, as they, too, are long and thin, but they do not have raptorial front legs.



Female mantids generally are larger than the males and have a stouter abdomen. It is commonly believed that the praying mantid female eats the male's head during the mating process, but this only happens occasionally in the wild unlike in captivity. After mating in the fall, the females lay numerous eggs (dozens to hundreds, depending on the species and conditions) in a frothy secretion attached to a plant stem that hardens into a stryofoam-like egg case, below (an ootheca). The adults die a few weeks later.

The eggs overwinter within the egg case and hatch in the spring into a very small version of the adult. Although they resemble the adult, the nymphs may be a different color or pattern. As they go through incomplete metamorphosis over the course of the growing season, they grow in size, eventually developing wings as they reach the adult stage in late summer or fall. They tend to be clumsy fliers, and rarely are seen in flight.

All praying mantids are predaceous, feeding on virtually anything they can catch, such as flies, beetles, crickets, moths, and grasshoppers; larger species of tropical mantids will also eat other animals, such as lizards, frogs, or even hummingbirds.

They are ambush predators, sitting and waiting or very slowly stalking with the front legs raised up, poised to clamp down on whatever insect of the appropriate size moves in front of them – including other mantids. The grasping response of the mantid is incredibly fast so targeted prey rarely escapes. They quickly begin to devour the captured animal with their chewing mouthparts.

Mantids in turn are eaten by birds, spiders, bats, or fish (if they fall in the water). Mantids are frequently cryptically colored to match their normal habitat. This camouflage makes them less likely to be noticed by their prey until it's too late. Some resemble leaves or other plant parts. Many can change their color somewhat to better match their surroundings. When hunting they sometimes sway back and forth to mimic plants moving in a breeze.

Although they are considered beneficial insects because they eat other insects, they are not particularly useful for biological control because they are indiscriminate feeders and will eat pollinators and other beneficial insects as well as pests, they do not target specific pests, and their cannibalistic nature limits the number of mantids that can exist in an area. But they make great insect ambassadors for introducing children and adult to the world of biology and insects (or just for their entertainment value).

Raising mantids in captivity from an egg case is a relatively easy classroom activity, although it probably will not be possible to get the nymphs to mature into adults. Egg cases can be collected in fall (although they blend in very well and are not easy to see) or purchased from a number of suppliers. They are found in a wide variety of urban, rural, and natural habitats, and are not generally easy to spot. Sometimes they are found on flowers or attracted to lights at night in late summer. To encourage mantids in the garden, limit pesticide use and provide the dense vegetation they prefer.

Of the 1500 species of mantids worldwide, most are tropical. Only 20 species occur in the U.S. and of those, only three occur in the upper Midwest. The smallest is the native Carolina mantid, *Stagmomantus Carolina* (below). It is a mottled, dusty brown color, grows only about 2 inches long, and has long antennae. The other two – European mantid (*Mantis religiosa*) and Chinese Mantid (*Tenodera aridifolia*; sometimes incorrectly referred to as *T. sinensis*) – were introduced to North America from other parts of the world in the late 1800's either accidentally or as garden predators. The European mantid is pale green and about 3 inches long, and the Chinese mantid is 3 to five inches long and bright green, light brown to tan, or a combination of those colors.

Carolina mantis

European mantis

Chinese mantis

For more information about mantids, visit:

- https://uwm.edu/field-station/praying-mantis-encore/
- https://www.nationalgeographic.com/animals/invertebrates/facts/praying-mantis
- https://wisconsinpollinators.com/Garden/G_PrayingMantis.aspx

Lawn Weed Control: Timing is Critical

By Scott Reuss, Agriculture and Horticulture Agent, Extension Marinette County

The thermometer has had some ups and downs recently, but spring is definitely here and plants are growing. Many homeowners have started lawn management tasks for the year, but others have not yet had to done so due to different soil types and localized weather conditions. One part of lawns that most homeowners would like to do away with is weeds.

One thing that is difficult for most of us to accept is that weeds are not the problem - they are just visible symptoms of the problem. The real problem is that the lawn is not thick enough or healthy enough to keep open soil spaces from occurring in the lawn. Nature fills space. In this case, it fills space with weed seeds that are given the opportunity to sprout if they get to the soil level. The soils and climate in our area are not conducive to perfectly lush, thick lawns that will keep most weed seeds out, and thus the reason for this article. If you constantly have issues with certain spots, it may be due to shade or soil factors. You may want to consider conducting a soil test of the soil in that area to see if you have a significant pH imbalance or potassium deficiency.

We can't stop nature, but we can give it fewer opportunities. Minimizing weeds starts with proper lawn management. Mow when needed, not because of the calendar. When you mow, leave the cutting deck as high as you can and don't cut more than 1/3rd of the height of the lawn at any one time. In other words, cutting 4.5" grass to 3" is about right. The reason to leave lawn as tall as possible is that turf root systems are proportionate to the aboveground mass. A lawn cut at 3" will have a much larger and deeper root system than one cut at 2". That makes a huge difference in thickness and stress overcoming ability of your turf. *(Also refer to page 4 for the 'No Mow May' initiative for pollinators for more about lawns in spring).*

Weed management approaches vary widely, as some people like plant variety in their lawn and others want to have a very uniform lawn. Whatever your overall approach may be, one key is to make sure that any weed management additions to your lawn are done at the optimum time of the year. The early part of the growing season is not the best time to manage most weeds. The exception to that statement is crabgrass (below).

The opportune time to apply crabgrass control products is when the forsythia (branchy, yellow-flowered shrub) start blooming and that is right about now in most areas. Their bloom time coincides with soil temperatures being correct for crabgrass to start germinating. As an annual weed, crabgrass can be most readily controlled with the use of pre-emergent herbicides which interfere with seedling establishment and survival. Applying such products too early (the products work for about 5 or 6 weeks) or too late allows some seedlings to survive, probably enough to successfully set enough seed for next year. These products are most easily applied by using a treated fertilizer product at the label specified rates on the product.

One thing to note is that if you are not controlling crabgrass, there is no real need to fertilize until later in the year, as there is plenty of naturally available nitrogen right now. The optimum time to fertilize your lawn if you fertilize once per year is actually in mid to late September. In our area it is often beneficial to use the winterizer-type of fertilizer which applies both nitrogen and potassium. If you are a higher-level lawn manager, then you will fertilize more often, usually applying between one-half and one pound of actual nitrogen per 1,000 sq. ft. of lawn, but no more than 4 total lbs. per 1,000 sq. ft. per year.

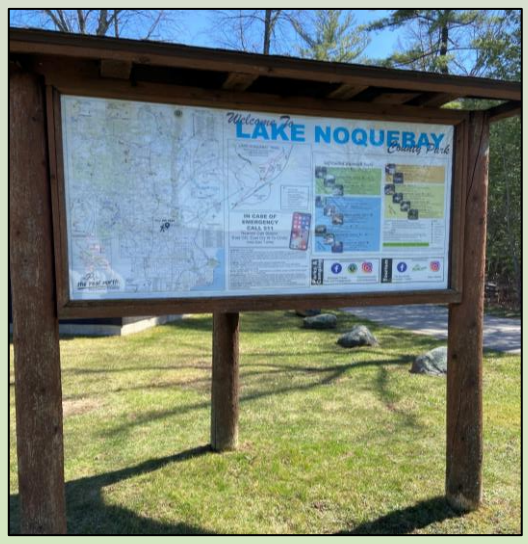
Other key weed species in our area are mostly broadleaf perennials. These include dandelion, ground ivy (locally known as creeping Charlie, above), Antennaria (pussytoes), clovers, plantains, hawkweeds (below), and other species. All of these species are actually most efficiently controlled by using a broadleaf targeting herbicide containing 2,4-D; mecoprop or MCPP; and dicamba in mid-September. At that time of the year, perennials are pushing energy into their crowns to survive. They will also absorb and translocate the herbicide product into their crowns, meaning you get the best control. One proper fall application may give you as much control as 2 or 3 spring applications. The next best time to manage a targeted perennial weed species is when they are in full bloom, as that is a time when their energy reserves are lowest.

Physical control of newly found species or small infestations works well, but can be physically demanding. You can also cover patches of weeds with clear plastic that is sealed on the edges. This will kill the plants under the area and then you will need to re-seed the lawn, so is more work but may be the right approach in certain situations. Also, there are organic weed control products available. For example, corn gluten meal can help manage crabgrass, but only works well after it has been used multiple years in a row and it will also inhibit turfgrass seed success dramatically if you try to re-seed an area.

One way to get more details about lawn management is to read the lawn care publications provided free on-line by UW-Madison, Division of Extension. Links and descriptions of all these publications can be found at: https://learningstore.extension.wisc.edu/collections/lawns-turf. Contact Agriculture/Horticulture Agent Scott Reuss with any horticultural or agricultural questions via phone or e-mail. He can be reached at 715-732-7510 or scott.reuss@wisc.edu. You can also review horticulture resources at: https://marinette.extension.wisc.edu/horticulture/.

New Signage at Lake Noquebay County Park Main Boat Landing

If you visit Lake Noquebay this spring for fishing, boating, swimming, or picnicking, you'll notice some new informational signage near the main boat landing! The Parks Department installed updated information about the park, maps, and aquatic invasive species.



Lake Noquebay provides a swimming beach, boat landing, changehouse with flush toilets for swimmers, lake fishing, and picnic facilities. There is a large lodge available for day use rental for $100.00 per day (plus a $10.00 reservation fee). The park is located east of Crivitz – take GG out of Crivitz east about three miles, then turn left on Noquebay Road.

CAMPERS CORNER

Marinette County Parks

Finished updates at Dave's County Park!

Dave's Falls recently received some demolition. An additional parking lot for those busy summer days!

Camping season has officially started!

Reserve here marinettecounty.com/parks

Glow Hike

Hosted by Marinette County Parks & held at

Thunder Mountain Overlook

13778 Thunder Mountain Rd, Crivitz 54114

September 18, 2021

7:00 pm - 8:30 pm

(Sun should set around 6:55 pm)

$5.00/car

(no registration needed)
Pay at the pay pipe after parking your vehicle.

For added fun: *please wear glow attire to help light up the paths!*

Follow us on Facebook
Marinette County Parks and Campgrounds

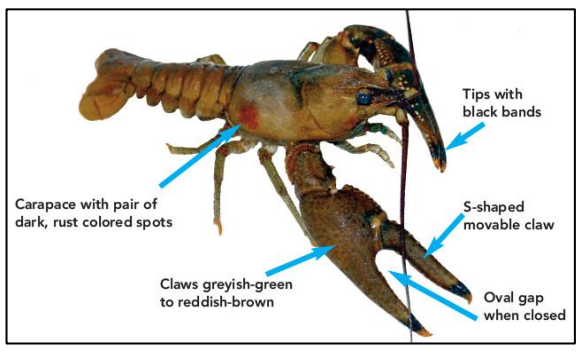
Follow us on Instagram
@marinettecountyparksandcamping

Contact the Parks office at 715-732-7531 or visit
www.marinettecounty.com/departments/parks/general-information/campgrounds-and-parks/

Invasive Species in Marinette County - What We are Doing About It

https://www.marinettecounty.com/departments/land-information/invasive-species/ and https://dnr.wisconsin.gov/

Invasive species are any organism not native to an area and which harms native wildlife habitat, the economy or even human health. Invasive species are primarily spread by people, often by accident. People travel around the world very quickly and often return with uninvited species. In their new homes, invasive species may have few predators, diseases, competitors, or other natural controls. Existing native species may be crowded out, eaten, or killed by introduced diseases.



Above: Rusty crayfish are found in Wisconsin and surrounding states, the northeastern states, New Mexico and many areas in Ontario, Canada. In the areas they inhabit, the rusty crayfish have dominated the native crayfish by taking over their habitat and natural forage at alarming rates. It comes from streams in the Ohio River basin states of Ohio, Kentucky, Illinois, Indiana and Tennessee. It is suspected that the species was transported via bait bucket by transient anglers who used them as bait while fishing.

Invasive species can drastically change habitats and ecosystems such that they provide little food or shelter to native species. They can reduce species diversity, decreasing the total number of species that live in an area. In some cases, invasive species can chemically or physically alter ecosystems to such a degree that they are uninhabitable by native species.

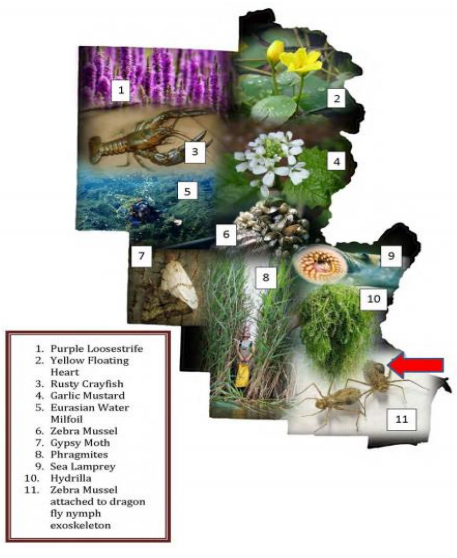
Above: Garlic mustard invades high-quality upland and floodplain forests and savannas, as well as disturbed areas, such as yards and roadsides. It is sometimes found in full sun, though most often grows in areas with some shade, and does not do well in acidic soils. Garlic mustard exudes antifungal chemicals into the soil that disrupt associations between mycorrhizal fungi and native plants, suppressing native plant growth.

Aquatic Invasive Species (AIS) - Marinette County has more than 400 lakes and flowages and 1,200 miles of streams. These lakes and streams are vital to our tourism economy, which brings in more than $113,000,000 annually. Unfortunately the spread of aquatic invasive species threatens economic, recreational, and environmental harm to these important natural resources. Some of the most troublesome AIS in Marinette County are: Phragmites (below), Eurasian water milfoil, zebra mussels, and rusty crayfish.

Terrestrial Invasive Species - Marinette County's public and private forests are also critically important to our tourism economy and forest products industry. Our County forest is the third largest in Wisconsin and provides myriad recreational opportunities as well as income for County government. Invaders such as Gypsy Moth, Jumping Worms, Garlic Mustard, and Glossy Buckthorn have the potential to alter plant species composition of the forest and damaging our ability to utilize and enjoy them.

Invasive Species Management and Control - Marinette County is working with many levels of government, NGO's, and private landowners to prevent the introduction of invasive species, slow their spread, and eradicate them where possible. Since 2004, Marinette County has worked on 25 grant funded projects related to AIS. In addition, our *Northwoods Journal* has featured many articles on terrestrial and aquatic invasive species. Past articles can be viewed under the *Northwoods Journal* link at https://www.marinettecounty.com/departments/land-information/environmental-education/northwoods-journal/. Marinette County also offers invasive species curricula through the Teaching Outdoor Awareness & Discovery (T.O.A.D.) program.

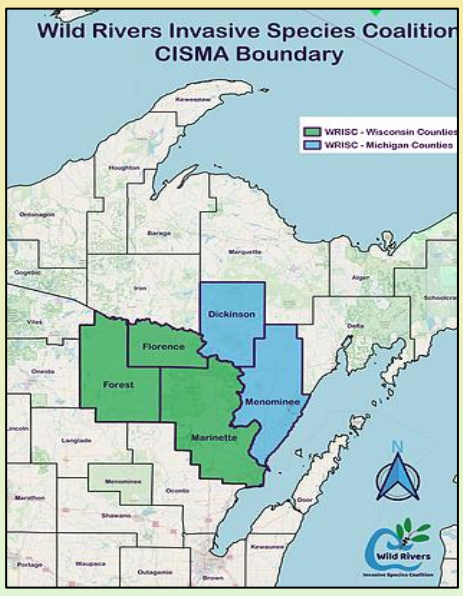
Visit the sites above for more information and links about invasive species in Marinette County. You can also read about the **Marinette County Invasive Species Strategic Plan** at https://www.marinettecounty.com/departments/land-information/invasive-species/marinette-county-invasive-species-strategic-plan/. This plan lays out how we can increase awareness of invasive species to prevent their introduction. It describes new tools and techniques to eradicate pioneer infestations before they spread. Finally, it identifies the tools for minimizing the impacts of existing populations of invasive species.



Wild Rivers Invasive Species Coalition - a Partner Helping Marinette County Manage Invasive Species

https://www.wrisc.org/

The Wild Rivers Invasive Species Coalition (WRISC), formed in 2010, is a cooperative invasive species partnership operating in northeast Wisconsin and the Upper Peninsula of Michigan. The partnership consists of a wide range of partners and members from local, state, tribal, and federal agencies, land managers, utility companies, civic organizations, businesses, and individuals, all interested in the education and management of invasive species in the five county WRISC area (see map below).



Non-native invasive species can have devastating ecological and economic impacts to communities. Industries such as forestry, agriculture, and outdoor recreation are all at risk, as are native fish and wildlife habitats. Invasive species are often widely dispersed across the landscape, and do not respect geopolitical boundaries. As such, this coalition strives to combine multi-agency resources and expertise to coordinate education and management of invasive species across borders, promoting best management practices that will help to slow the spread of these invaders.

WRISC's mission is dedicated to the management of invasive species on our lands and waters through cooperation, education, prevention, and control.

The primary goals of WRISC are to:

- Raise awareness about invasive species in the WRISC area
- Prevent the introduction and spread of invasive species through monitoring, early detection, and rapid response
- Address known populations of invasive species utilizing Integrated Invasive Species Management methods where appropriate
- Consider restoration during invasive species projects
- Continually work to enhance collaboration among all stakeholders involved with WRISC

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Midwest Grants for Pollinator and Monarch Butterfly Habitat

https://www.nfwf.org/media-center/press-releases/nfwf-announces-17-million-grants-monarch-butterfly-and-pollinators-conservation-fund

In early April, the National Fish and Wildlife Foundation (NFWF) announced $1.7 million in grants to conserve monarch butterflies and other insect pollinators in Arkansas, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Ohio, Pennsylvania and Wisconsin. The grants will generate $3.3 million in matching contributions for a total conservation impact of $5 million.

The grants were awarded through the Monarch Butterfly and Pollinators Conservation Fund (Pollinator Fund), a partnership between NFWF and Bayer Crop Science, Shell Oil Company, the U.S. Department of Agriculture's Natural Resources Conservation Service, the U.S. Forest Service, and the U.S. Fish and Wildlife Service.

"Monarch butterflies and pollinators make essential contributions to natural ecosystems, agriculture and the economy," said Jeff Trandahl, executive director and CEO of NFWF. "The grants announced today will advance collaborations with public and private land managers to restore and improve habitat for pollinators and other wildlife."

The projects supported by the 13 grants announced today will increase the quality and quantity of pollinator habitat for monarch butterflies, rusty patched bumble bees and other native pollinators. The projects will also enhance outreach and organizational coordination. Collectively, the funded projects will:

- Restore and enhance more than 32,000 acres of pollinator habitat
- Collect more than 200 pounds of milkweed seed
- Propagate more than 19,000 milkweed seedlings
- Host more than 160 workshops and meetings that advance pollinator conservation

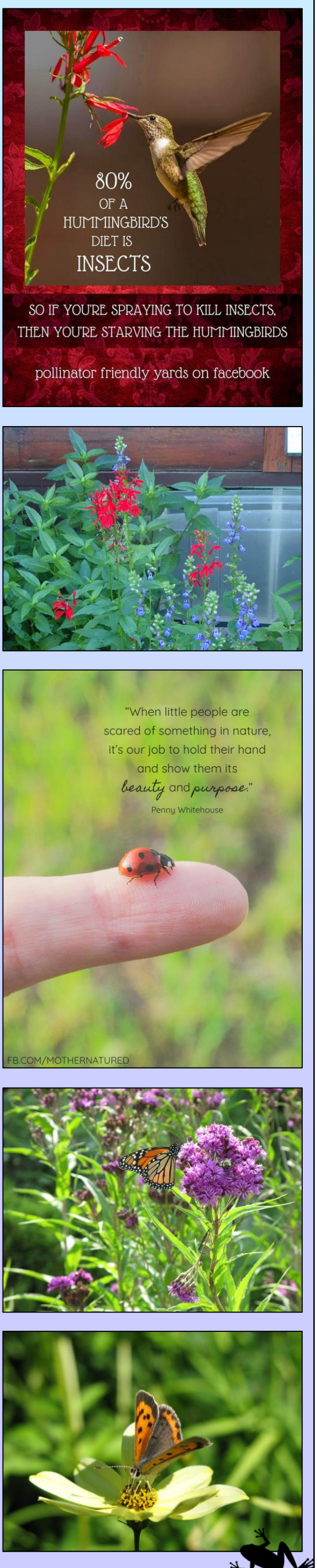
"These grants enable us to increase capacity to help landowners and land managers plan and implement key conservation practices that benefit the monarch butterfly," said NRCS acting Chief Terry Cosby.

The monarch butterfly is one of the most iconic species in North America and its annual migration cycle is one of the most remarkable natural phenomena in the world. However, over the past 20 years, the monarch butterfly population has declined by more than 80 percent throughout much of its range. Several other pollinators have experienced similarly dramatic declines in recent decades. Habitat loss is a primary threat to many of these species.

In 2015, NFWF established the Monarch Butterfly and Pollinators Conservation Fund, a public–private partnership that funds projects to protect, conserve and increase habitat for monarch butterflies and other pollinators. By leveraging the resources and expertise of its partners, the fund is helping to reverse recent population declines and ensure the survival of these valuable species.

A complete list of the 2020 grants made through the Monarch Butterfly and Pollinators Conservation Fund is available here. A short video about the Monarch Butterfly and Pollinators Conservation Fund can be viewed here.

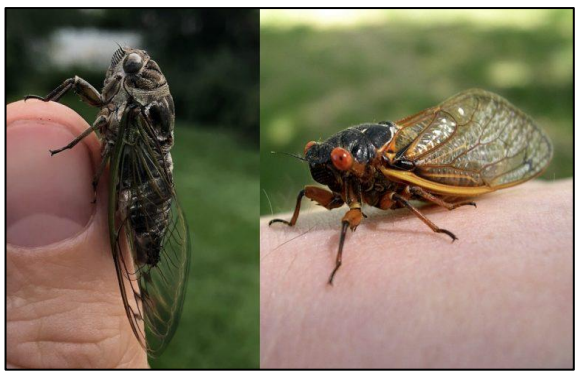
The National Fish and Wildlife Foundation (NFWF) is dedicated to sustaining, restoring and enhancing the nation's fish, wildlife, plants and habitats for current and future generations. NFWF works with both public and private sectors and matches private dollars with public funds and uses science-based conservation and competitive grant programs to direct those resources to projects that produce the greatest measurable results for wildlife. Learn more at www.nfwf.org.



Cicada Mania in Wisconsin? Not Until 2024

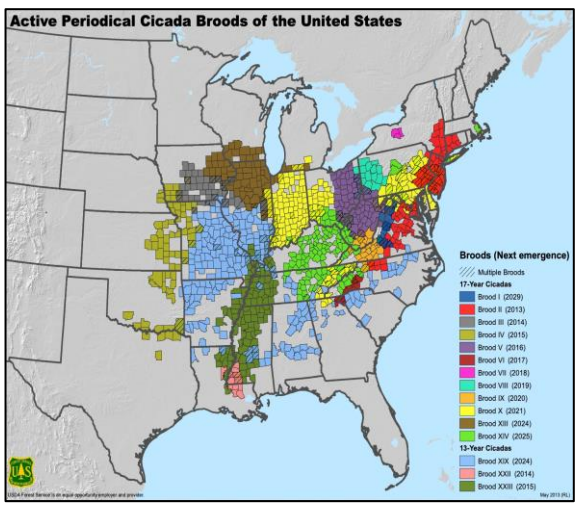
https://insectlab.russell.wisc.edu/2020/06/29/cicada-mania-in-wisconsin-not-quite-yet/ and https://hort.extension.wisc.edu/articles/cicadas/

Perhaps you've heard some buzz about periodical cicadas (*Magicicada* spp.) lately. These insects resemble our typical "dog day" cicadas, which we see in mid-to-late summer in Wisconsin, but they are orange and black with vibrant reddish eyes instead of a dull greenish color. Parts of the US are currently seeing mass emergences of periodical cicadas, which appear by the millions every 13 or 17 years depending on the species. I've had a number of questions this last month asking if this was "the year" for us to see them in Wisconsin, but it's not time for the big show…yet.



At left - a common "dog day" cicada; at right, a periodical cicada.

Periodical cicadas are sorted into cohorts known as "broods", which occur in particular geographic areas and emerge at specific points in time. For the most part, these insects are excellent timekeepers and some broods have been documented as far back as the 1600's in the eastern US. There are entire websites and apps dedicated to these insects and their schedules, and scientists have labelled broods with Roman numerals to help differentiate the cohorts.



Map of active periodical cicada broods of the United States – southern WI will see brood XIII in 2024.

With all the broods out there, some parts of the U.S. do see these cohorts overlap in space, but these can be separated by the years in which they emerge. In Wisconsin, the situation is fairly straightforward as we only see a single brood: Brood XIII. Brood XIII's 17-year cicadas last emerged in 2007, meaning that we've got four more years to wait until their mass emergence in 2024.

The cicadas are a group of insects in the order Hemiptera (true bugs) closely related to the much smaller aphids and leafhoppers with more than 1,300 species worldwide and the majority in the tropics. The dog-day cicada (*Neotibicen canicularis*), also colloquially known as the dogday harvestfly or heatbug in some places, is the most common species in Wisconsin, although there are at least nine species that occur here.

All cicadas have a similar shape, with stout, wedge-shaped bodies and a wide head with prominent, wide-set eyes on either side of a bulging nose-like structure (the post-clypeus), short antennae, and clear wings with noticeable veins that are held over their bodies like a roof. Dog-day cicadas, below, are about 1½ inches long with greenish bodies with black markings.

Periodical cicadas are black with reddish-orange eyes, legs, and wing veins. They cannot jump and do not walk or run well, so fly when they need to move more than a few inches. Cicadas are commonly eaten by birds, as well as bats, cicada-hunter wasps, ground beetles, dragonflies, spiders and robber flies, as well as other animals when there are mass emergences. They are consumed by humans in China and less commonly in other parts of the world.

Most people wouldn't notice the well-camouflaged cicadas at all if it wasn't for the noise they make. Their persistent hum is the soundtrack of summer afternoons in the Midwest as the males "sing" to attract mates. The buzzing sound is created by rapidly flexing thin drum-like membranes (tymbals) on the underside of the abdomen at a high speed and amplifying the sound in enlarged chambers derived from the tracheae. The noise can be deafening when lots of males are calling all at once. *Some cicadas produce sounds over 100 decibels!* The repertoire of mating songs and other acoustic signals is unique to each species.

That of the dog-day cicada is often described as a loud, high-pitched whine similar to a power saw cutting wood lasting for several seconds before fading away. Females lack the tymbals so do not make the buzzing noise but both can also make a different sound by flicking their wings.

Females lay small clusters of elongate eggs in slits cut with her a large, saw-edged ovipositor into twigs and small branches, favoring the tender twigs of one-year-old growth. The eggs hatch in 6-10 weeks and the young nymphs drop to the ground to burrow to reach the tree roots. The strong first pair of legs of the nymphs are modified for digging and excavating chambers near roots where they feed on xylem sap. There they feed underground on xylem from the roots for two or more years, only moving from their original feeding site if adverse conditions arise.

In the last nymphal instar, each nymph constructs its own exit tunnel to the surface. The so-called annual cicadas take 2-9 years, while the periodical cicadas take 13 or 17 years. The dog-day cicada normally completes its development in two years. Once the nymphs have completed their development they emerge from the soil at night and crawl several feet up onto tree trunks or other vertical surfaces.

There they split their exoskeleton lengthwise down the back and the adult cicada crawls out, hanging downward as its wings expand and harden, leaving the characteristic hump-backed shell (*exuvium*) behind attached to the tree (below). The adults are active for a few weeks in late summer, spending their time mating and laying eggs without feeding much if at all on plant sap.

Annual cicadas appear from mid- to late summer (usually June through August) with broods that are not synchronized so some appear every year. The periodical cicadas emerge relatively synchronized over a few nights in large numbers at specific locations once every 17 years in the northern part of their range and once every 13 years in the southern part. Almost every year different groups (called broods) emerge somewhere in the eastern United States in late spring or early summer.

Brood XIII, the predominant one in the southern Wisconsin counties of Crawford, Dane, Grant, Green, Iowa, Jefferson, Lafayette, Milwaukee, Richland, Rock, Sauk, Walworth, and Waukesha, isn't due to show up again until 2024. Brood VI, a less abundant population that was supposed to emerge in 2017, historically has been seen in central Wisconsin but wasn't noted this time.

Cicadas feed on the roots of many woody plants. Oaks are commonly attacked but some other

Continued next page

Engage the Senses with a Sensory Garden

www.treehugger.com/engage-senses-with-sensory-garden-5115066

A successful sensory garden is one that caters to all of the senses. Beyond just looking beautiful, it works to create a holistic space for the eyes, ears, nose, skin, and mouth. Engaging all of the senses in a garden is a wonderful way to help you relax and feel fully immersed in the natural world.

Create a Lush Haven with Dense Planting

The first thing when creating a sensory garden is that it should feel like a world apart. It should be a space that, in a way, makes the outside world – and its distractions – disappear. This sense of separation can help a garden become more immersive. A place where you can be mindful, melt into a moment and truly be at peace.

Dense, layered planting – particularly around the periphery of your garden – can help make it feel like a more enclosed and nurturing space. Pay particular attention to the boundary of a garden closest to roads, or where your garden can be seen by neighbors. Dense border planting need not make a garden feel smaller or more confining. Consider "borrowing" from the surroundings and making plant choices that blur the boundaries; a thick and lush hedgerow or border can make your garden feel part of the surrounding landscape – and make it feel larger and more expansive overall.

Combine Colors for Different Effects

It is possible to create a wide range of different visual effects in a garden simply through the plant choices you make. The color palette you opt for in your garden will play an important role in determining the overall feel and mood of the space. Limiting the color palette by choosing flowering plants with a more limited range of hues can help make a space feel calmer and more relaxing.

A green and white garden, for example, can be a very soothing space. Conversely, if you include a riot of color, a garden can often have an energizing effect.

Consider the Soundscape

Visual appeal is not the only element to a sensory garden – you should also consider the soundscape. The sounds around you in the space can also be very important in creating mood and allowing you to feel close to nature. First of all, consider how the wind moves through trees and other plants, rustling the leaves and creating a background noise of susurration. Of course, birdsong will often be another very important element in the soundscape of a garden. And don't forget the buzz and calls of insects. Make sure you are providing plenty of habitat for wildlife so that they can provide a soundtrack.

Another way to add to these natural background noises is with running water. Adding a water feature to a garden pond, or even creating a babbling brook through your space is a great way to create a calmer mood. Wind chimes, rain chains, and other such features can also add different elements to complement the natural sounds of your surroundings.

Fill the Air with Scent

When you choose plants for your garden, fragrance is another very important thing to consider in a sensory garden. Consider especially carefully the plants with fragrance that you might place closest to your home, and to outdoor seating areas. And consider placing fragrant plants along pathways and even between paving so they release their scent when trampled or brushed against.

Lavender, roses, lilac, jasmine, and a wide range of aromatic herbs like thyme, rosemary, lemon balm, mints, etc. are all wonderful plants to include in a sensory garden – to give just a few examples. Just remember to choose all plants with the climate and specific location in mind.

Create Tactile Zones

Touch is a sense that we do often don't think much about in a garden. But creating tactile zones is a wonderful way to make sure that

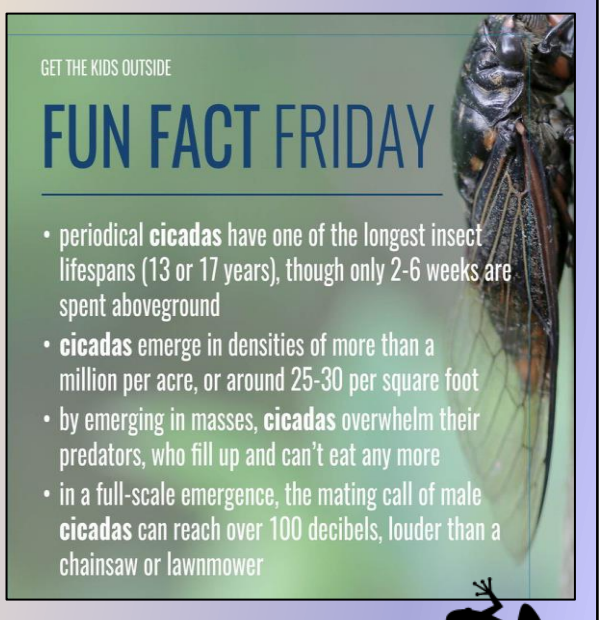
Continued next page

Cicadas, continued from page 12

preferred trees include apple, ash, dogwood, hawthorn, hickory, maple, mountain ash, and willow. Some other of the more than 80 reported hosts they may be found on in Wisconsin include arborvitae, blueberry, grape, raspberry, rhododendron, spirea and viburnum. In addition to the root feeding (which is generally inconsequential unless populations are very high on young or small plants) damage is caused when the female cicadas lay their eggs. The oviposition slits (below) often cause the twigs to split, wither, and die, causing "flagging" of the affected stems.

Oviposition scars (below) appear as roughened punctures on twigs of many woody plant species. This is generally only a concern on young trees that have mainly branches that are of a size (¼ to ½ inch diameter) preferred by cicadas; established trees can tolerate a fair amount of flagging and is often considered a form of natural pruning. Injury to young trees or shrubs may result in the death, or more often, the disfigurement and loss of form due to attack of the tender leader shoots. Epinasty, an unnatural curvature of the new growth resulting from more rapid growth on the uninjured side of the branch, and breakage of the current season's growth are the most common symptoms.

Annual cicadas rarely need to be controlled since they don't occur in huge numbers simultaneously. Twigs severely damaged by periodical cicadas should be removed and destroyed to prevent the eggs from hatching to produce another generation of cicadas. Delayed pruning of ornamentals from the fall prior to a predicted periodical cicada emergence until after damage has been done can reduce the amount of plant material removed.



Marinette County's T.O.A.D. Programs Popular this Spring

By Anne Bartels, Information & Education Specialist - Land Information Department

The Land & Water Conservation Division's T.O.A.D. (Teaching Outdoor Awareness & Discovery) environmental education programs have been very popular this spring, as they usually are, with the improving conditions outdoors. Last year, as with most everything else, T.O.A.D. was put on the back-burner, but now that being outdoors is more of an option for most groups due to warming weather, there has been an uptick in my programming schedule.

I did have a few programs over winter, but not nearly as many as in a usual year, and in March I had none - a first ever! Things started picking up in late April with several programs, and this month I have something almost every day. I use disinfectant spray on everything between sessions, and have hand sanitizer available for groups as always.

Above, Peshtigo 7th graders catch and identify aquatic macroinvertebrates to determine the health of Trout Creek. The next day, they conducted chemical testing of the creek – nitrates, phosphates, pH, dissolved oxygen, and turbidity – to compare to the biological findings.

Coleman 2nd graders look for insects in the pollinator garden of the Coleman Nature Trail area.

T.O.A.D. programs are scheduled into the summer months, too – I will be doing several programs at Badger Park for the Peshtigo Parks & Recreation Department, the YMCA, Goodwill Possibilities, Crivitz Youth, Inc., and with the Lifelong Learning Institute program through UW-Green Bay Marinette campus.

Above, Peshtigo 4th graders look for insects, fungi, moss, and amphibians that help contribute to decomposition in Badger Park. Below, a blue-spotted salamander escapes into a log after we caught & observed him.

I also helped the STEM 7th grade class from Peshtigo Middle School install a pollinator garden (below). I will be helping install a few more pollinator gardens this summer, and will be checking in on last summer's "Pollinator Invitation Garden" ("P.I.G.") participants.

For more about the T.O.A.D. program, visit www.marinettecounty.com/departments/land-information/environmental-education/toad/, or contact me at abartels@marinettecounty.com or 715-732-7784.

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Amphibian Week Is May 2-8!

https://www.nps.gov/articles/000/amphibian-week.htm

May 2-8, 2021, is the first annual international Amphibian Week. Why do amphibians need this special recognition? For starters, amphibians are unique. They begin their lives in the water, but most of their adult life is on land. And they are *ectothermic*, meaning their body temperature relies on external sources. Amphibians are sensitive to invasive species, drought, disease, and other changes where they live. So researchers study amphibians because they often show early signs of stressors, like disease and climate change.

And many are in danger - about 1/3 of all amphibian species are in danger of extinction. Many animals rely on amphibians for food, so when they die off, it affects the entire natural area. Some of the threats amphibians face include disease (like the ranavirus or chytrid fungus), changes in snowpack/rainfall, loss of wetlands, and splitting up their habitats. We need amphibians, and now they need us. **Visit the website above to learn more!**

Garden, continued from page 13

you really engage with the natural world around you.

Grasses to brush past as you make your way along a pathway, a wild lawn area where you can take off your shoes and feel grounded, nubby tree bark that wants to be touched, and tactile plants like lamb's ears, mullein, etc. close to a seating area can all be wonderful ideas for a sensory garden.

Get Your Taste Buds Tingling

Finally, being able to graze as you go is another great way to make sure you feel fully immersed in a sensory garden. Pop sweet strawberries or other soft fruits in your mouth as you pass by. Graze on fresh salad leaves, or peas straight from the pod. Or nibble on a peppery nasturtium. Grow a variety of interesting edible crops in your garden and there will always be something to tickle your taste buds.

Kiosk Signage Complete at Peshtigo Fish Viewing Platform

All signage is now installed at the Fish Viewing Platform area in Peshtigo. Check it out!